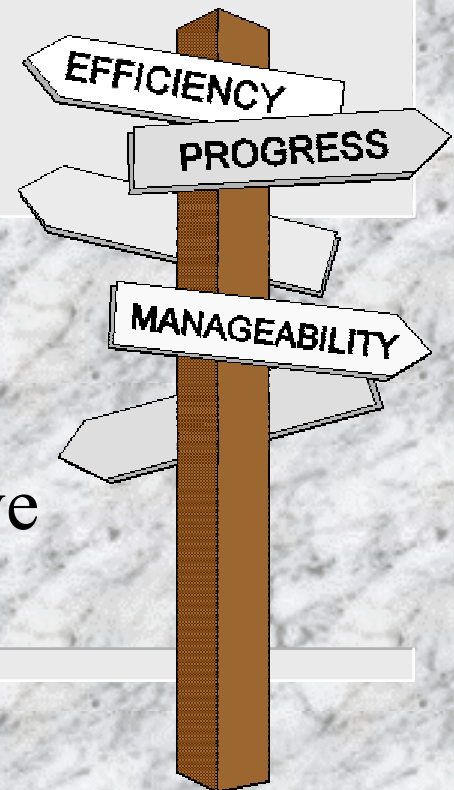


# Lessons Learned

Reviewing and Adapting Legacy Signing  
Design Procedures to the new PMii Initiative

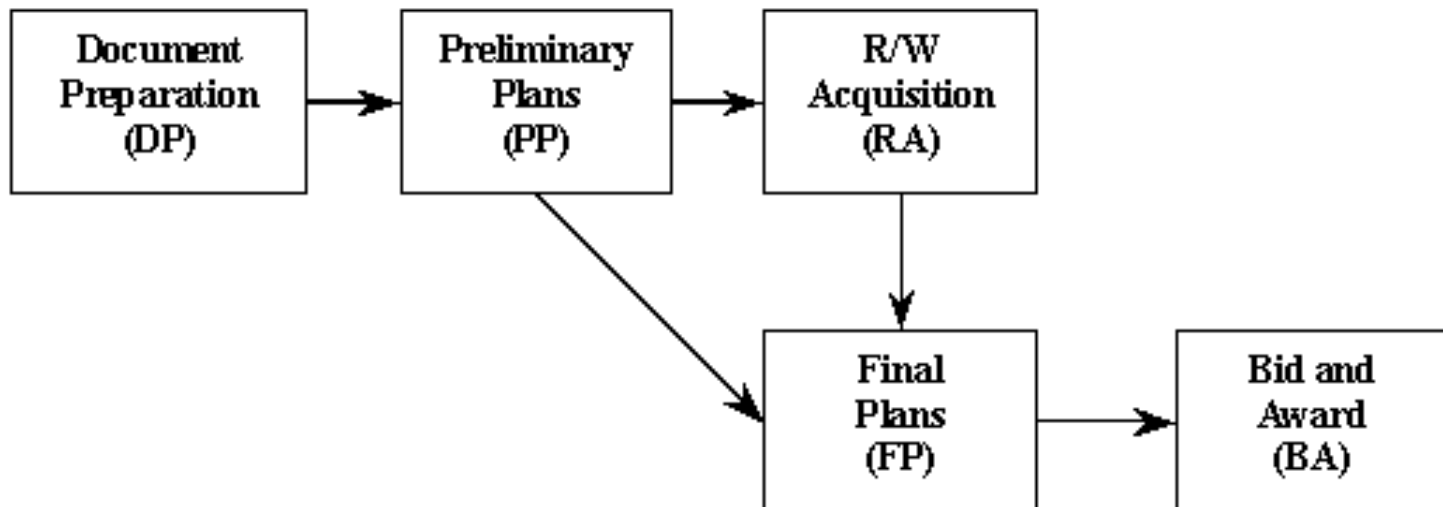


# Lessons Learned

- With the implementation of the Project Management Improvement Initiative (PMii) by the preconstruction units, it was necessary to review the process of designing signing plans from concept to working drawings and determine the necessary activities involved. These were then translated to activity elements with estimated man-hours within the Work Center Manager to create a template for the design process.

# Planning Process

**Example Flowchart of Basic TIP Project**



# Document Preparation

- Necessary steps now with the implementation of Work Center Manager
  - Have activity elements assigned that must be completed
- Prepare Scoping Cost estimate
  - Viewing hearing map
    - Although may show different alternatives, will assist in determining scope of signing
      - Determining routes & destinations: if signing work is needed outside project limits (advanced signing or reassignment of routes)
      - May help with determining interim signing if project is part of a phased-constructed corridor

# Document Preparation

- Conduct project scoping meeting
  - Identifying Route Designation Changes
    - Earlier the route change request is undertaken the sooner the appropriate authorities can approve the change, easing in the final sign design for a project
      - Interstate must get AASHTO approval
      - US route gets FHWA
      - NC route gets Board of Transportation
    - Need to treat as part of the permitting process

# Preliminary Plans

- **Process has not changed too much, but with Work Center Manager now have activity elements that will aide in developing preliminary plans earlier in the project design process**
- **Prepare Preliminary Signing concept**
  - Will be able to use information from hearing map to develop concept, streamlining design time
  - Most useful in determining destination signing, warning and regulatory signing can be adjusted as project nears final plans

# Preliminary Plans

## ■ Traffic Staging concept

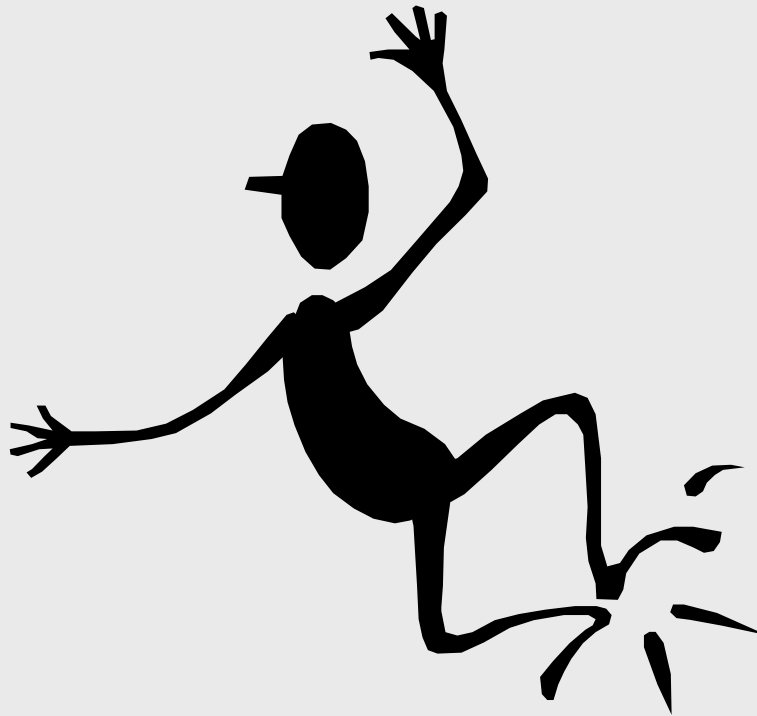
- Prepare preliminary signing locations
  - necessary to coordinate with roadway & hydro
- Signing coordinates with Divisions, Roadway, Structure Design, TC and Signals, Utilities
- Detour Signing

## ■ Preliminary field inspection

- Review plans for constructability
- Attend field inspection meeting

# Final Plans

- Process has not really changed, but now have some critical path elements better defined



# Final Plans

## ■ Final field inspection

- Review plans for constructability
  - Have an internal Traffic constructability meeting for signing, signals, pavement markings, ITS to make sure there are no conflicts
- Attend Final Field Inspection
- Coordinate barrier control with Roadway

# Final Plans

- Develop final plans & Specifications
  - Include field comments
  - Finalize quantities & estimate
  - Check list of standards & provisions
- Signing Plans turned in
  - PS&E date met

# Questions?

